1. SOFTWARE ENGINEERING

Semester	Subject Code	Category	Lecture Hrs		Theory Hrs		Practical		Credits
			Per week	Per Sem	Per week	Per Sem	Per week	Per Sem	
VI		Elective - III	5	75	5	75	0	0	3

COURSE OBJECTIVE

- To know more about the systematic concept for designing, developing, implementing and maintaining the software products in IT Industry.
- This course helps to understand the concept software and what are the various steps involved to deploy the software under engineering concept.

COURSE OUTCOMES

On the successful completion of the course, students will be able to

CO Number	CO Statement	Knowledge Level (K1-K4)
CO1	Acquire strong fundamental knowledge in science, mathematics, fundamentals of computer science, software engineering and multidisciplinary engineering to begin in practice as a software engineer.	**K1**
CO2	Building the analysis model and acquiring the modeling concepts.	**K2**
CO3	Design applicable solutions in one or more application domains using software engineering approaches that integrate ethical, social, legal and economic concerns.	**K3**
CO4	Applying testing methods and acquiring the testing strategies	**K3**
CO5	Apply new software models, techniques and technologies to bring out innovative and novelistic solutions for the growth of the society in all aspects and evolving into their continuous professional development.	**K3**

K1-Remember; K2 –Understand; K3-Apply; K4-Analyz

MAPPING WITH PROGRAMME OUTCOMES

COS	PO 1	PO2	PO 3	PO4	PO 5	PO 6
CO1	M	S	S	S	S	S
CO2	S	S	M	M	S	S
CO3	S	S	M	M	S	S
CO4	M	S	S	S	S	S
CO5	M	S	S	M	S	S

S- Strong; ***M- Medium;*** ***L- Low***

SYLLABUS

UNIT-I: Introduction of Software Engineering **15 hrs**

Introduction: - Evolving Role of Software - Changing Nature of Software – Software Myths; A Generic View of Process: Layered Technology - Process Models: Waterfall Model - Evolutionary Process Models.

UNIT-II: Requirement Engineering **15 hrs**

Requirements Engineering: Tasks - Initiating the Requirements Engineering Process - Eliciting Requirements - Building the Analysis Model - Requirements Analysis - Data Modelling Concepts.

UNIT-III: Data Engineering **15 hrs**

Data Engineering: Design Process and Design Quality - Design Concepts - The Design Model Creating an Architectural Design: Software Architecture - Data Design - Architectural Design - Mapping Data Flow into Software Architecture; Performing User Interface Design: Golden Rules.

UNIT-IV: Testing Strategies **16 hrs**

Testing Strategies: Strategic Approach to Software Testing- Test Strategies for Conventional and Object Oriented Software - Validation Testing - System Testing -Art of Debugging. Testing Tactics: Fundamentals - White Box- Basis Path - Control Structure - Black Box Testing Methods.

UNIT-V: Project Management **14 hrs**

Project Management: Management Spectrum - People - Product - Process - Project. Estimation: Project Planning Process - Resources - Software Project Estimation - Project Scheduling - Quality Concepts - Software Quality Assurance - Formal Technical Reviews.

Distribution of Marks: Theory 85% and

Applications 15% TEXT BOOKS

S. No	Authors	Title	Publishers	Year of publication
1	RogerS Pressman	Software Engineering	A Practitioner's Approach", Sixth Edition, McGraw Hill International Edition, New York	2005
2.	Richard Fairly.	Software Engineering concepts	Tata McGraw-Hill edition.	1998

REFERENCE BOOK

S. No	Authors	Title	Publishers	Year of publication
1.	Ian Somerville	Software Engineering, 10th Edition	Pearson Education	2018
2.	Mall Rajib	Software Engineering, 2/E	PHI	2006

3.	Rajesh Narang	Software Engineering-Principles and Practices	Tata McGraw-Hill edition.	2015
4.	Rod Stephens	Beginning Software Engineering	Wiley Publications	2012
5.	Ronald J.Leach	Introduction to Software Engineering	CRC press	2016
6	Ian Sommerville,	**Software Engineering**	**PEARSON INDIA**	2015
7	Ronald J Leach	Introduction to software engineering	Chapman & Hall/CRC	2000
8	Rajib Mall	Fundamentals of Software Engineering	Prentice HallIndia Learning Private Limited; .	2014

WEB SOURCES

1. http:/fullstackengine.net/software-engineering/
2. http:/freetechbooks.com/software-engineering/

TEACHING METHODOLOGY

- Class Room teaching
- Assignments Discussions
- Home test
- PPT Presentations
- Simulator & Case Tool

SYLLABUS DESIGNER

1. Mrs. G.SANGEETHALAKSHMI , Assistant Professor and Head, Department of Computer Application
2. Mrs. N.AMBIGA, Assistant Professor, Department of Computer Application